Installation Manual

Pégasus™
NX

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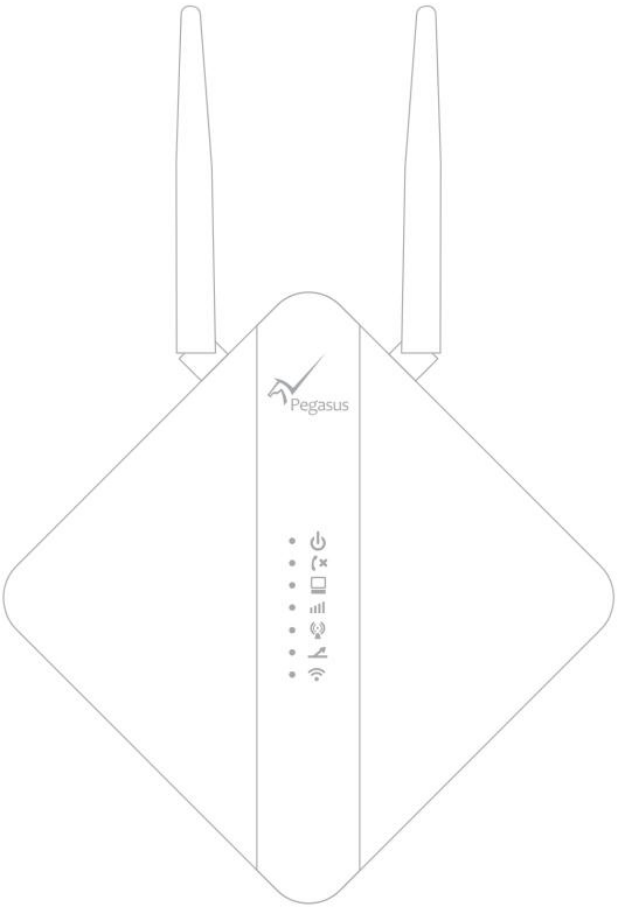

Pegasus™ NX

Installation Manual | April 2013

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1 Introduction

Scope

This Installation Manual is aimed in providing detailed information and complete listing as a reference to install Pegasus™ NX.

Audience

This Installation Manual is intended for end users who are going to install Pegasus NX. The readers or end-users of this installation manual should be familiar with the Pegasus™ Studio - Configuration Tool and the Zeus™ Server.

Note:

To get information about the Pegasus™ Studio – Configuration Tool, refer the Pegasus™ Studio – User Manual and the Pegasus™ Studio – Quick Start Manual.

To get information about the Zeus™ Server, refer the Zeus Server – User Manual and the Zeus™ Server – Quick Start Manual.

Contact Information or Comments

For general contact, technical support, questions or comments to report documentation errors and suggestions, contact 3i-Corporation Technical Writing Team.

Our aim is to make this installation manual as helpful as possible. Keep us informed of your comments and suggestions for improvements.

3i-Corporation appreciates feedback from the users of our information.

Text Conventions

Begin Instruction:

To begin a procedure under any topic. Use a numbered list for points under procedure.

Note:

Provides a message or reminder related to a topic or section.

Warning:

Information provided under this section MUST be followed.

Several different sources of power can be connected to your Pegasus™ NX. Disconnect all sources of power before servicing. Control units and associated equipments may be damaged by removing and/or inserting sim cards, or interconnecting cables while the unit is energized.

DO NOT attempt to install, service, or operate this unit until this manual is read and understood.

Caution:

To ensure proper unit operation, this product must be tested in accordance with 3i-Corporation standards. Reacceptance testing is required after any change, addition or deletion of unit components, or after any modification, repair or adjustment to unit hardware or wiring.

Important:

Provides important information related to a topic or section.

Tip:

Provides advice or suggestion related to a topic or section.

Troubleshooting:

Provides information to troubleshoot or fix any Pegasus™ NX related issues or problems.

2 Overview

About the Installation Manual

This Installation Manual is to describe the Pegasus™ NX features, technical specifications, and installation instructions including components description, mounting, and wiring.

What is Pegasus™ NX?

The Pegasus™ NX Alarm Panel Communicator is an extremely compact, robust device in terms of communication interface for alarm panels. It brings the most innovative and reliable technologies for data communication to the *Fire and Intrusion Alarm Panels* prepared to operate only with conventional telephone lines.

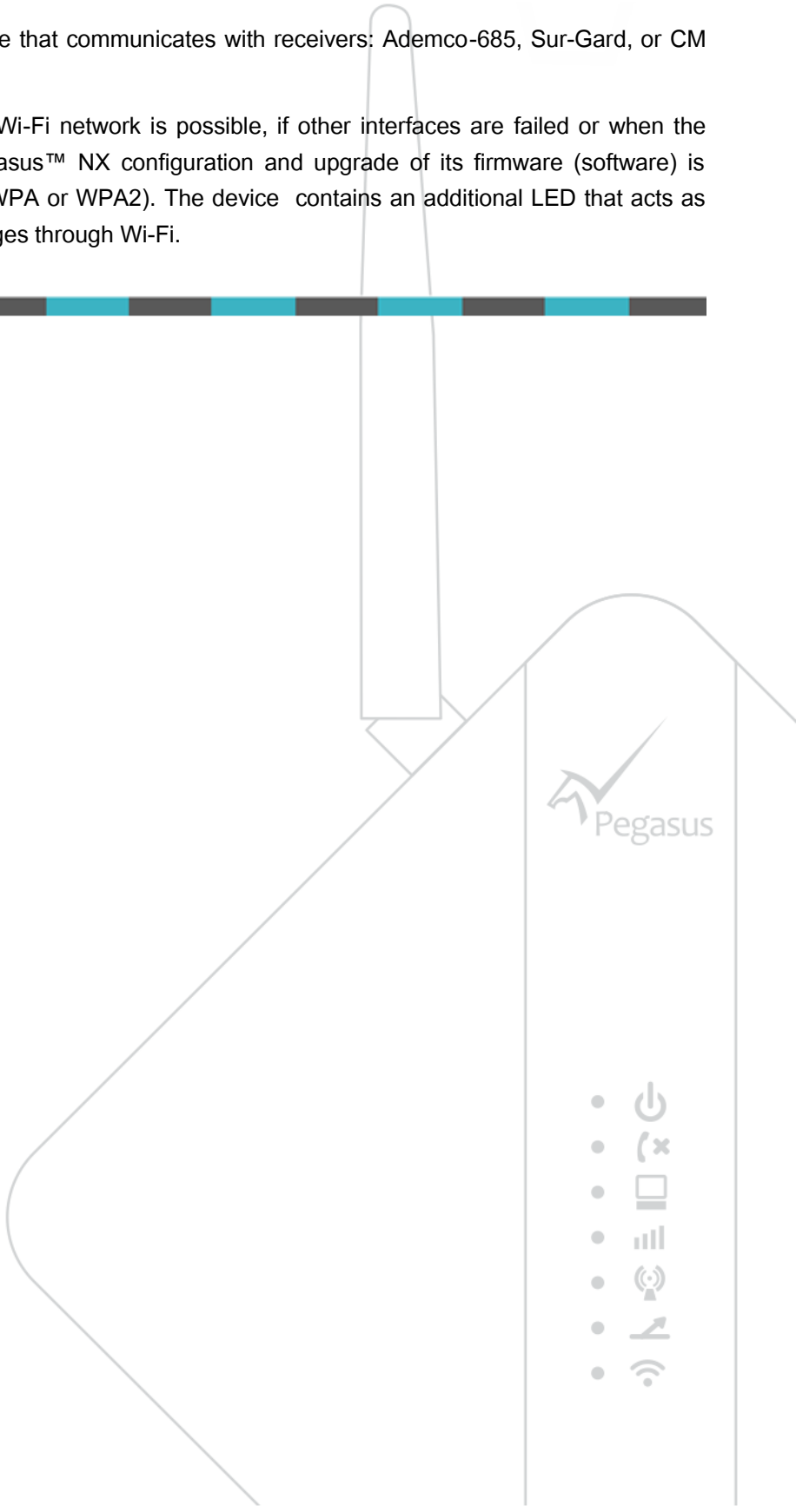
The device is fully compatiable with alarm panels that communicate using the contact ID protocol and provides high speed, reliable and low cost communication. It is like a modem attached to any alarm system that passes digital information to a 24/7 alarm receiving center which is able to respond to the received signal.

The device acts as a communicator between your alarm panel and the monitoring station. Event transmission is possible via Ethernet network TCP/IP, Wi-Fi, and/or GPRS. The device is interfaced between the alarm panel and the telephone line (optional). When the device is ON (active), it enters the Ethernet TCP/IP network (Internet/Intranet), wireless network (Wi-Fi) and GSM operator network via GPRS (data channel) to establish connection with the Zeus™ server, and thus creates an online communication channel between the monitored client and the alarm monitoring company. Pegasus™ NX transmits all events received from an alarm panel (contact ID protocol) to the Zeus™ server. All information transmitted by the device are cryptographed (AES Rijndael, 128 bits), and thus their top confidentiality is assured.

The Zeus™ server is a multi-task software that works as a virtual receiver which receives all events transmitted by the device, and then transfers them to the monitoring software as a conventional receiver (it simulates the communication protocol of receiver, such as Ademco-685, Sur-Gard, Domus-4, Silent Knight (protocol ITI) and CM Plus. It also carries important system task management, checks communication with the device (online or offline) constantly, presence of

telephone line at client etc. Any monitoring software that communicates with receivers: Ademco-685, Sur-Gard, or CM Plus can be used.

Transmission of real time alarm panel events via Wi-Fi network is possible, if other interfaces are failed or when the preferred interface is Wi-Fi. Alteration of the Pegasus™ NX configuration and upgrade of its firmware (software) is possible remotely via the secured Wi-Fi network (WPA or WPA2). The device contains an additional LED that acts as Wi-Fi indicator. You can also receive debug messages through Wi-Fi.



3 Technical Specifications

Power Supply

1	Input Voltage Range	9VDC – 15VDC	2	Maximum Current	450mA

Battery

1	Battery Type	Lithium-Polymer Capacity: 2000mAh	2	Battery Backup	Upto 6 hours depending on network conditions

Processor

1	CPU	ARM 32bit Cortex-M3	2	Speed	32Mhz

Ethernet

1	Network Standard	IEEE 802.3u compliant fast ethernet	3	Ethernet Cable	CAT5 MDI/MDI-X auto crossover
2	Data Rate	Full Duplex, 10/100 Base TX Ethernet PHY	4	Protocols	TCP/IP, UDP/IP

GSM/GPRS

1	Modem	Quad-band EGSM 850 / 900 / 1800 / 1900 MHz	5	SIM Card Holder	Dual SIM Support
2	Protocol Support	TCP/IP or UDP/IP	6	Antenna: Impedance	50Ω
3	Antenna Type	External Dipole Antenna Module (DAM)	7	Antenna: Peak Gain	2.0 dBi
4	Antenna: Frequency Range	824-960MHz, 1710-2170MHz	8	Antenna: Return Loss	-4.4 dB

Wi-Fi

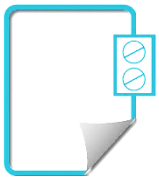
1	Network Standard	EEE 802.11 b, g, compliant.	6	Security Types	WPA, WPA2
2	Typical WLAN Sensitivity	88dBm at 8% PER, 11Mbps -74dBm at 10% PER, 54Mbps	7	Typical WLAN Transmit Power	+19.5dBm at 11Mbps, CCK (11b) +15.0dBm at 54Mbps, OFDM (11g)
3	WLAN Antenna: Type	External Dipole Antenna Module (DAM)	8	WLAN Antenna: Frequency Range	2.4 - 2.5GHz
4	WLAN Antenna: Impedence	50 Ω	9	WLAN Antenna: Return Loss	10 dB
5	WLAN Antenna: VSWR	2.0 Max	10	WLAN Antenna: Peak Gain	2.0 dBi

Virtual Telephone Line Output

1	Constant Current Source for Alarm Panel	25mA, 20V			

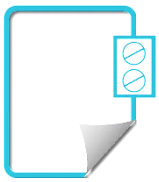
Telephone Line Connection

1	Maximum Telephone Line Voltage Detection	100VAC, 48VDC	2	Minimum Telephone Line Voltage Detection	3VDC



PGMs

1	3 PGMs- Open Collector Type	Supporting 300mA sink current per PGM	2	1 PGM- SPDT Relay	Supporting 125VAC/60VDC @2A



Zones

1	Number Of Wired Zones	Two	3	Supporting Modes	Single mode and Double mode zone interfacing.
2	End of Line Resistor (EOLR)	1K, and 2.2K			

Serial Port

1	Serial Debug (UART) Interface	10 PIN Right-Angled Box Header	3	Baud Rate	115200 Baud
2	Use	For Configuration, firmware upgradation and to view debug messages			

USB

1	USB 2.0 Device Interface	Mini B USB	3	USB Full Speed	12 Mbit/s
2	Use	For Configuration, firmware upgradation and to view debug messages			

Tamper Switch

1	Tamper Type	Internal	2	Use	To trigger an event on unauthorized enclosure opening

LEDs

1	Power On Status	First LED from top to indicate the Power ON Status	5	GSM Status	Fifth LED from top to indicate GSM Status
2	Telephone Line Cut Off	Second LED from top to indicate Telephone Line Cut OFF	6	Alarm	Sixth LED fro top to indicate Alarm
3	Online	Third LED from top to indicate Online status	7	Wi-Fi Status	Seventh LED from top to indicate Wi-Fi status
4	GSM Signal Strength	Fourth LED from top to indicate GSM Signal Strength			

Environmental Specifications

1	Operating Temperature	-20℃ - 60℃	3	Storage Temprature	-20℃ - 60℃
2	Relative Humidity	10-90%, no condensation			

Board Dimensions

1	Length	82mm	3	Thickness	1.6mm
2	Width	80mm	4	Number of Layers of PCB	Four

Enclosure Dimensions

1	Length	112mm	3	Height	4.2mm
2	Width	112mm			

4 Pegasus NX Features

- Built-in telephone line cut off detector that enables the device to detect telephone line cut off and send occurrences to the Zeus™ server.
- Periodically tests the regular service availability on the monitored clients telephone line (detects fixed telephone service interruption situations in case of the monitored clients lack of payment).
- Built-in one programmable SPDT relay output that can be used for various crucial operations. For example, switching a high current powered bell or siren.

  SPDT relay refers to Single Pull Double Throw electric or electronic switching device.

  This SPDT relay allows electrical signals, digital or analog, to switch from a single input to one of two outputs.
- Built-in two zones which are extended to four zone inputs. You can connect sensors or detectors to these zones.

  The device supports zone input wiring in both single-mode and double-mode. A sensor or detector can be connected in nine different ways.
- Built-in alarm panel cut off detector that enables the device to detect alarm panel cut off and send occurrences to the Zeus™ server.
- Permits testing the alarm panel proper functioning and constant monitoring of the physical connection with the alarm panel, and thus acts as an anti-sabotage resource.
- Built-in three programmable Open Collector (O.C.) outputs. These open collector outputs are very fast, low powered, solid-state switches.

  These programmable open collector outupts can be used to activate a buzzer or strobe light, open or close doors etc. When any of the three on board programmable open collector output activates, Pegasus™NX triggers any device connected to it.
- Compatible with any alarm panel that follows the Contact ID Protocol. Some well known alarm panels that work on the Contact ID Protocol and thus fully compatible with the device are: Paradox, Honeywell Ademco, Bosch, Napco, Inhep, DSC, Logic, FBII, Inovanet, Rokonet, etc

- Built-in dual sim card holder. The dual sim card holder allows you to insert two sim cards. You can use two sim cards from the same or different service providers (s).
- Can be used as the first or second communication channel for any alarm panel that follows Amdeco Contact ID Protocol. Generally, the device waits for events from alarm panel. If events are received, the device validates the event by checking its *Message Type, Event Qualifier* and *CRC*. If events are valid, then the device operates in two types of communication mode: 1st communication path and 2nd communication path.
- Supports Wi-Fi and thus acts as a wireless alarm panel communicator. The Wi-Fi competence is one of the revolutionary features incorporated in the device. Here, Wi-Fi is incorporated to give you an wireless communication option for having a security system monitored by a central station.
- Eliminates long distance phone call expenses, and thus acts as an inexpensive cost saving resource. The monitored client can be anywhere in the world and is never going to suffer due to increase in the communication expenditures.
- Built-in a tamper switch which helps in tamper detection. The tamper switch is connected to a digital input configured to generate an interrupt every time its status changes. The unauthorized opening of the cover of the device results in the tamper switch output.
- Built-in a battery compartment containing a 3.7V Lithium-Polymer 2000mAh rechargeable battery which provides power to the device in absence of the main power supply.
- Uses cryptographic data transmission by AES (Rijndael) 128/256 bits encryption, and thus secures your data from spying.
- Built-in the SMS ECO feature. You can send a blank SMS to the offine device using the configured phone number to check if it is operative or not. The device reverts back with an ECO SMS related to its current status.

  Sample ECO SMS

  PEGASUS NX INF: PEGASUS OFFLINE, CURRENT INTERFACE: GPRS, PHONE LINE: CUT OFF, PNR: PRESEND, GSM SIGNAL: 26, JAMMER: OPERATIVE, ETH LINK: DOWN, WIFI: SSID CONNECTED
- Allows the modification of its configuration and upgrade of its firmware (software) remotely via Internet. The remote configuration update allows the device to function accurately and helps to fix bugs that were present in the previous version. It also adds new features and updates.
- Have two ways out that can be controlled remotely, and thus makes it possible to Arm and Disarm the alarm panel without using the telephone line, depending on the resource being available on different alarm panels.
- Can work efficiently with both fixed/static or dynamic IP (DHCP) addressing. Fixed/Static IP addressing is for one customer on one IP address, whereas the Dynamic IP addressing assigns a different IP address each time the ISP customer logs on to their system.
- Can withstand double monitoring. You can configure both the Primary and Secondary Zeus™ Server settings using the Pegasus™ Studio - Configuration Tool.

- Offers possibility to communicate with both the Primary and Secondary Zeus™ Servers using different interfaces. This feature makes the device more robust and dependable as an alarm panel communicator. You can configure different interfaces as per your preference for both the Primary and Secondary Zeus™ Servers.
- Built-in GSM Jammer. GSM Jammer when enabled allows you to identify active jamming of the GSM/GPRS network. This feature helps to prevent intruders that use GSM Jammers to interfere with the normal network operation of the device.
- Allows device configuration through Ethernet.
- Capable of sending user friendly customized messages related to Alarm Panel Events and Pegasus™ Occurrences to the configured phone numbers. Maximum four phone numbers can be configured per Alarm Panel Event or Pegasus™ Occurrence.
- Offers FOTA capability, firmware updates are issued directly over-the–air from the GSM service provider to the GSM modem.

  Previously, firmware updates to the GSM modem required the help of specific service center. Another method of receiving updates has been by connecting the modem via a cable to a PC. Both of these methods were considered inconvenient by consumers and also relied on consumers actively seeking out updates. Therefore, 3i-Corporation® have now adopted FOTA technology to update the GSM modem.

5 Pegasus NX Components Description

Pegasus™ NX Components

Components apart from Pegasus™ NX Battery & Pegasus™ NX Circuit Board that together form the Pegasus™ NX Alarm Panel Communicator is listed in the below table:

Pegasus™ NX Front Cover

The Pegasus™ NX front cover is the outermost panel that can be attached perfectly to the Pegasus™ NX front panel and secures Pegasus™ NX terminals and LEDs.

Pegasus™ NX Front Panel

The Pegasus™ NX front panel is placed between the front cover and the rear panel. It fits perfectly on the Pegasus™ NX rear panel and secures the Pegasus™ NX circuit board, terminals, battery, etc from damage.

Pegasus™ NX Rear Panel

The Pegasus™ NX rear panel fits properly on the wall mounting bracket. The Pegasus™ NX rear panel holds the PCB with the help of four screws.

Pegasus™ NX Wall Mounting Bracket

The wall mounting bracket secures Pegasus™ NX on wall.

Pegasus™ NX LED Pipe

LED pipe helps to transmit light emitted by the on-board LEDs to the front panel and the front cover.

Pegasus™ NX Wi-Fi Antenna

RP-SMA Wi-Fi antenna is connected to the RP-SMA Wi-Fi adapter (part of the u.FL/IPX to RP-SMA Pigtail Wi-Fi RF Cable Adapter) towards the left side of Pegasus™ NX.

The Pegasus™ Wi-Fi antenna is flexible with tilt and swivel design that can be adjusted as per the requirement.

Pegasus™ NX GSM Antenna

RP-SMA GSM antenna is connected to the PCB mounted, right-angled RP-SMA RF jack towards the right side of Pegasus™ NX .

The Pegasus™ GSM antenna is flexible with tilt and swivel design that can be adjusted as per the requirement.

6 How to Mount Pegasus NX?

Mounting Instructions

Warning:

To mount Pegasus™ NX and make sure it stays on the wall, use a proper mounting kit for the job. Just remember, the anchors need to hold five times the weight of what you're putting on the mount.

Requirements

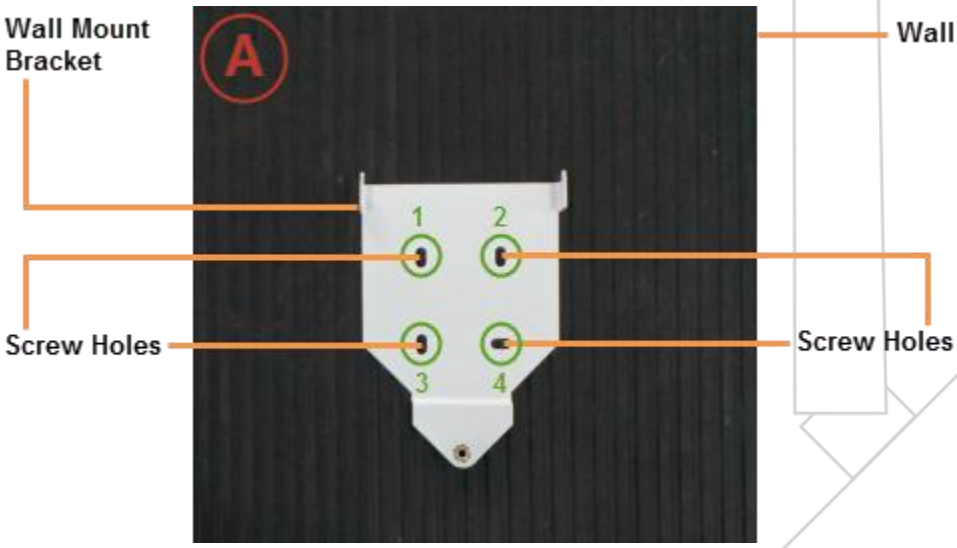
Materials	Wall bracket	Nylon anchor plugs
	Four Screws	
Tools	Spirit level	Drill and drill bits (masonry and steel if necessary)
	Stud finder (needed for non-masonry walls)	Screw driver

Mounting Bracket on a Masonary Wall

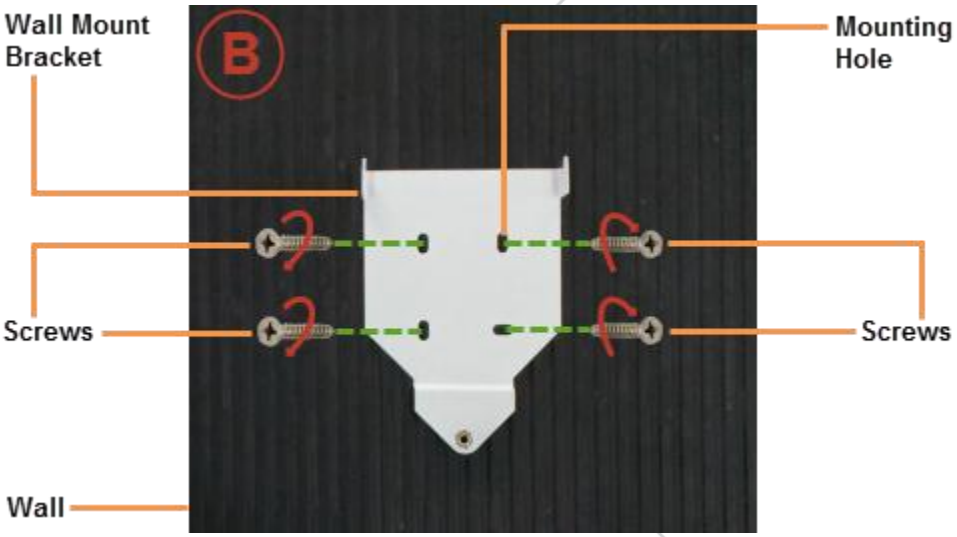
Search an appropriate and secure place to fix the wall mounting bracket and install Pegasus NX.

To mount bracket on a masonary wall

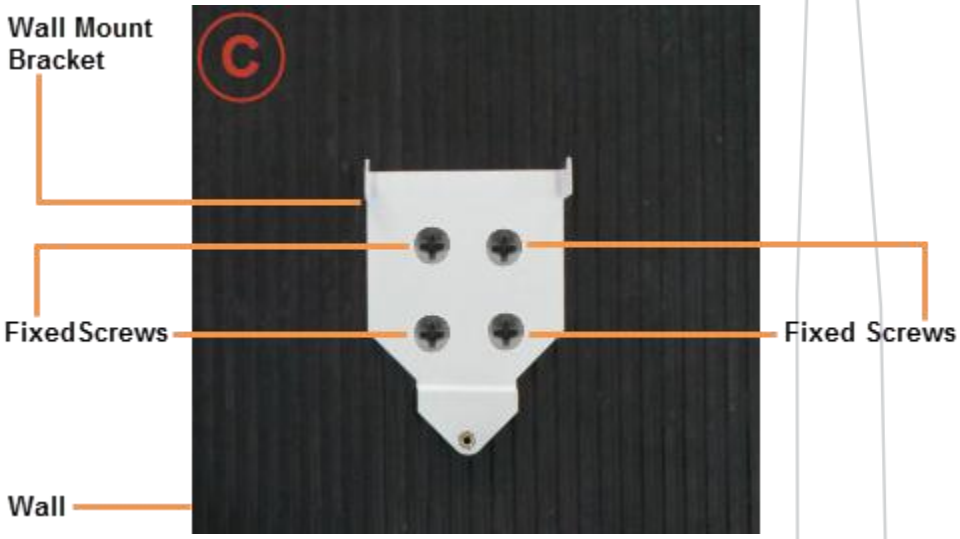
1. Position the wall bracket on the wall and mark out the mounting holes, see image A.



2. Next drill the mounting holes with a masonry drill bit, and then insert the nylon anchor plugs in the mounting holes.
3. Secure the wall bracket by screwing the coach screws in the clockwise direction into the wall with a screw driver, see image B.



4. A fully secured wall bracket looks straight, see image C.



Mounting Bracket on a Timber Stud Wall

The only difference when mounting the bracket to a plaster wall is that you must position the wall bracket so that it is attached to the middle of a timber stud. The plaster itself might not handle the weight of Pegasus™ NX due to its poor strength so using the timber studs is necessary.

To mount bracket on a timber stud wall

1. To identify the studs, use a stud finder or tap the wall gently to locate studs using a hammer and nail.
2. Once this is done drill the mounting holes in the centre point of the timber stud, and then secure the wall bracket by screwing the coach screws in the clockwise direction into the wall with a screw driver.
3. Now, the next step is to attach Pegasus™ NX to the wall bracket. Follow the instructions provided in the next section.

Tip

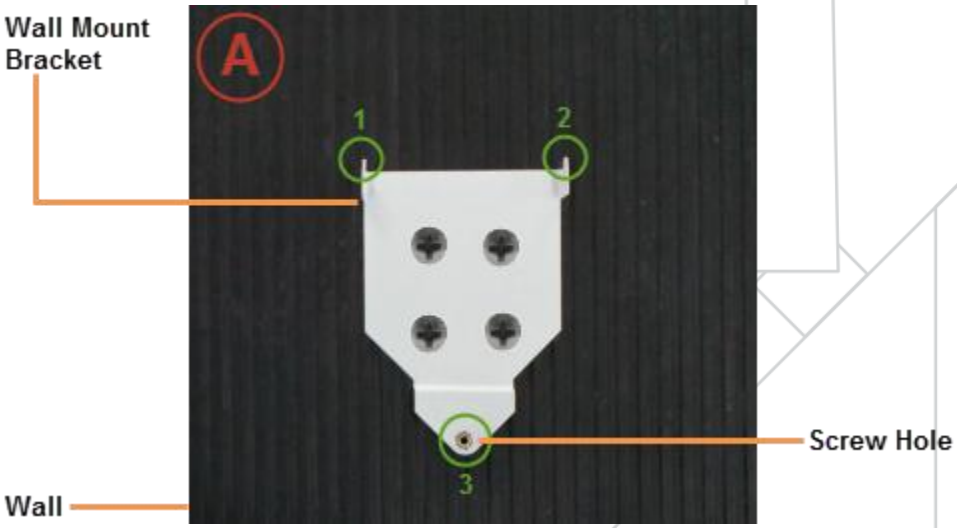
Use an electronic stud finder to find the outside edges of the two studs on which you want to attach your wall mount. Use masking tape to temporarily stick the mounting template to the wall at your pencil marks and use a level to keep your pencil marks straight. Then use the mounting template to measure the exact height you want to mount Pegasus NX on the wall. Measure from the floor up. Make sure the template is centered on the studs before drilling the mounting holes.

Fixing Pegasus™ NX on the Wall Bracket

Once the wall bracket is properly fixed on the wall, straight fix Pegasus™ NX to the wall bracket and follow the instructions provided.

To fix Pegasus™ NX on the wall bracket

1. Place the back side of Pegasus NX on the wall mount bracket as per the numbering in image A and B.
2. Once Pegasus NX is properly placed on the wall bracket at position 1 and 2, secure Pegasus NX by screwing the provided long screw in the clockwise direction into the screw hole (position 3) with a screw driver, see image A & B.



3. A properly fixed Pegasus™ NX looks straight and stable on the wall, see image C. In case it is in the tilted condition, simply adjust the wall bracked by slightly loosing the four screws as the wall bracket is built-in adjustable screw holes.

7 How to Connect Wi-Fi Antenna to Pegasus NX?

Requirements

Materials	RP-SMA Wi-Fi Antenna **	u.FL/IPX to RP-SMA Pigtail Wi-Fi RF Cable Adapter**
		**Available in the box, comes with the Pegasus NX package

To connect Wi-Fi antenna to Pegasus™ NX

1. Open the **Pegasus™ NX front panel**.
2. On the PCB, connect the **u.FL adapter** to the **u.FL/IPX connector** as shown in image B.

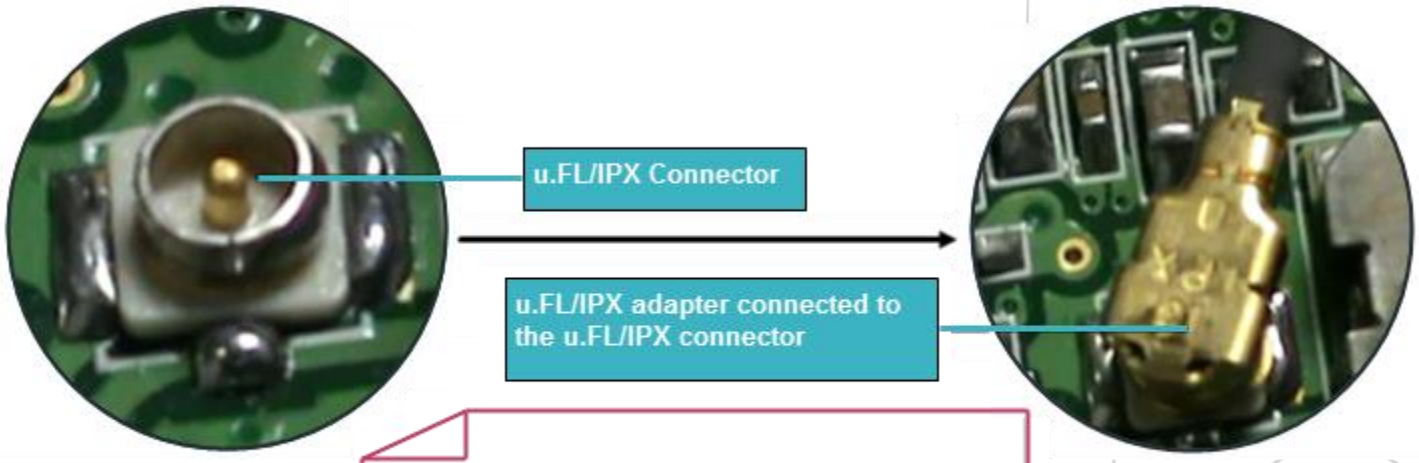


Figure A: On board u.FL/IPX adapter connected to the u.FL/IPX connector (part of the pigtail cable)

3. Connect the **RP-SMA Wi-Fi antenna** to the **RP-SMA connector** (part of the pigtail cable).

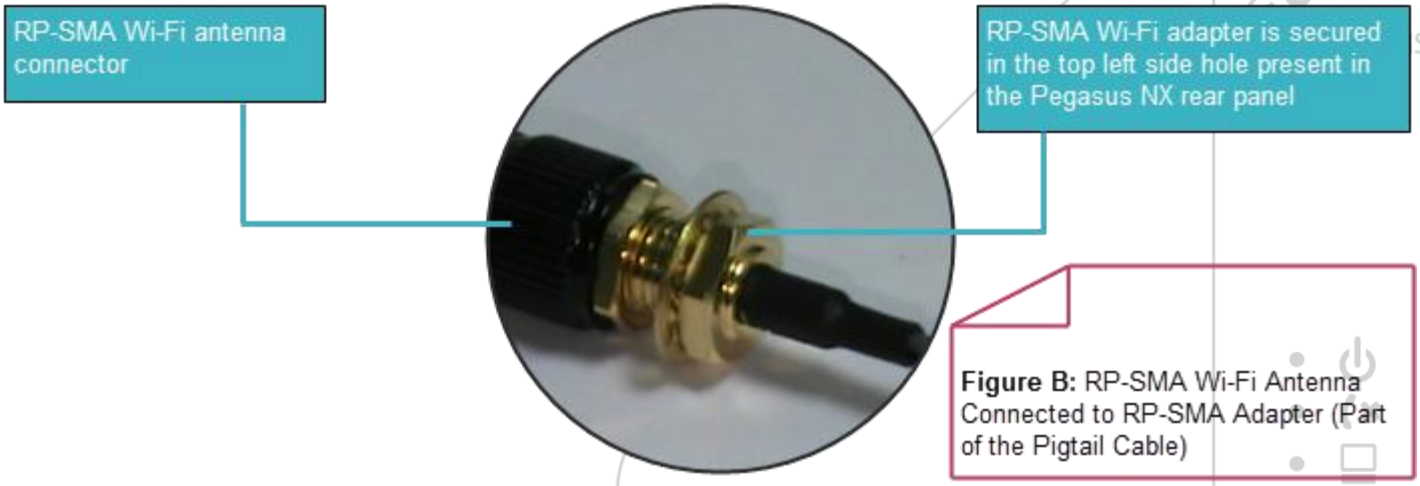

RP-SMA Wi-Fi antenna connector
RP-SMA Wi-Fi adapter is secured in the top left side hole present in the Pegasus NX rear panel

Figure B: RP-SMA Wi-Fi Antenna Connected to RP-SMA Adapter (Part of the Pigtail Cable)

Note:

Figure B is for demonstration purpose only. Here, the Pegasus NX rear panel is not visible, but in actual condition only the thread of RP-SMA Wi-Fi adapter (part of the pigtail cable) is available through a hole in the left-side of the Pegasus™ NX rear panel. Securing the Wi-Fi antenna on the RP-SMA adapter can be done in the same way as demonstrated in figure B above.

8 How to Connect GSM Antenna to Pegasus NX?

Requirements

Materials	SMA GSM Antenna**

**Available in the box, comes with the Pegasus™ NX package

To connect gsm antenna to Pegasus™ NX

1. Connect the RP-SMA connector (GSM antenna) on the PCB mounted, right-angled RP_SMA RF jack as shown in the below image.

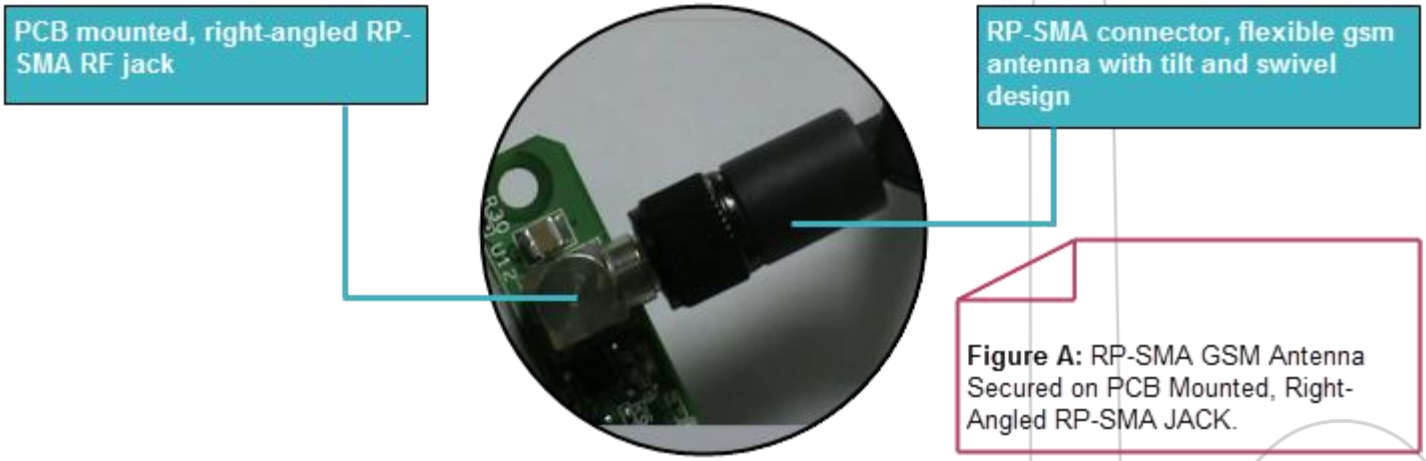


Figure A: RP-SMA GSM Antenna Secured on PCB Mounted, Right-Angled RP-SMA JACK.

Note:

Figure A is for demonstration purpose only. Here, the Pegasus™ NX rear panel is not visible but in actual condition only the thread of the PCB mounted RP-SMA jack is available through a hole in the right-side of the Pegasus™ NX rear panel. Securing the GSM antenna on the RP-SMA jack can be done in the same way as demonstrated in figure A above.

9 How to Insert GSM SIM Cards?

Requirements

Materials	GSM SIM card(s)**
	**Not provided in the box. SIM cards are not the part of Pegasus NX package.

Pegasus™ NX is built-in a SIM card holder that can accommodate two SIM cards. Once secured properly, these SIM cards offers wireless communication capabilities to report system events to a monitoring station.

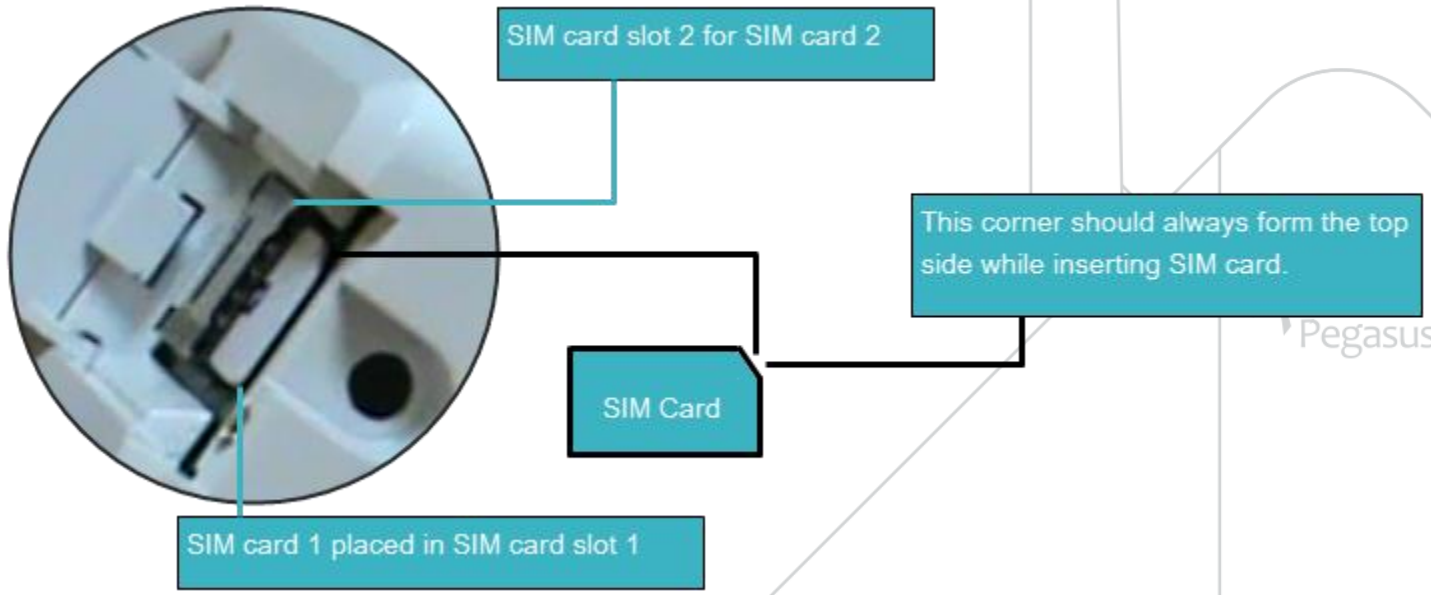
Device supports standard GSM provider SIM cards. The SIM card contains all your cellular telephone account information. In order to activate your SIM card, you must contact your local GSM network provider.

Note:

Before installing SIM cards, disable the Personal Identification Number (PIN). To learn how to disable PIN, refer to the cellular phone's manual for more information.

To install the SIM cards

1. Open the SIM cover by sliding it in the horizontally outer direction, and then lifting it in the upward direction.
2. The SIM card holder can accommodate two SIM cards. SIM card 1 should be placed in the lower slot (towards the gsm antenna). SIM card 2 should be placed in the upper slot (towards the SIM cover).
3. To insert SIM card in SIM card slot 1, hold the SIM card in a proper manner so that the cut-off corner is directed towards the upper direction as shown in the below image.
4. Adjust the SIM card 1 near the SIM card slot 1 opening and push it gently until the half portion of the SIM card is inserted inside the slot as shown in the below image.
5. Likewise, insert SIM card 2 in the SIM card slot 2 as shown in the below image.


SIM card slot 2 for SIM card 2
This corner should always form the top side while inserting SIM card.
SIM Card
SIM card 1 placed in SIM card slot 1

10 How to Connect Pegasus NX?

Wiring Instructions

Warning:

Wiring should be done by the trained 3i-Corporation authorized service personnel only.

Never install the device during lightning or storm.

Always use genuine 3i-Corporation approved accessories with the device.

Turn OFF power supply during wiring.

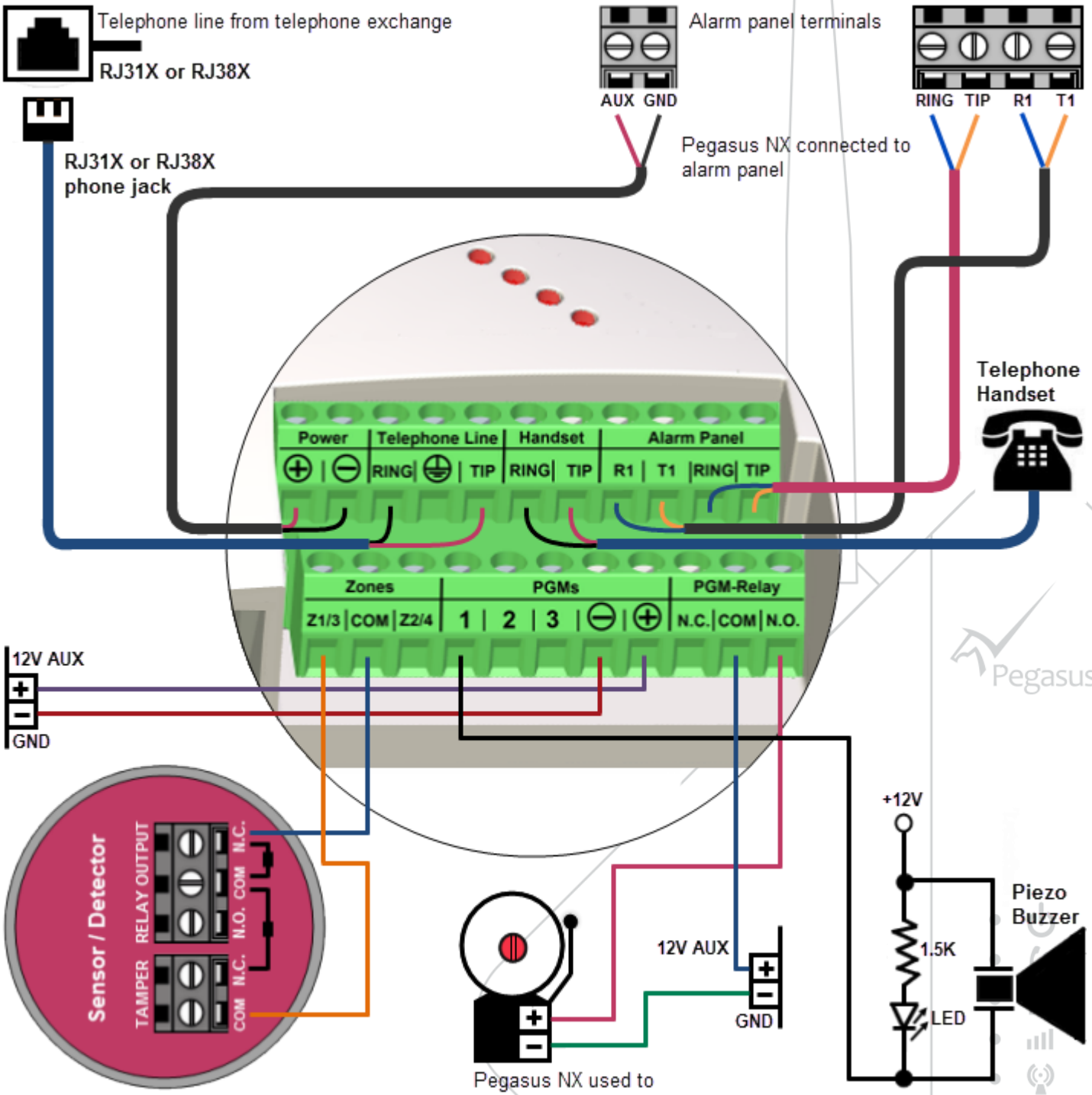
Wiring Example

Pegasus™ NX is built in four terminals: **R1**, **T1**, **RING** and **TIP** for alarm panel connections. These are fully compatible with any alarm panel that follows Contact ID Protocol.

Telephone Line and **Handset** terminals that can be used to connect wires from telephone exchange and telephone handset respectively. Use the RJ31X or RJ38X phone jack for connection.

The **programmable SPDT relay output** can be used for various crucial operations. For example, switching a high current powered bell or siren.

Three programmable open collector outupts can be used to activate a buzzer or strobe light, open or close doors etc. When any of the three on board programmable open collector outputs is activated, Pegasus™ NX triggers any device connected to it.



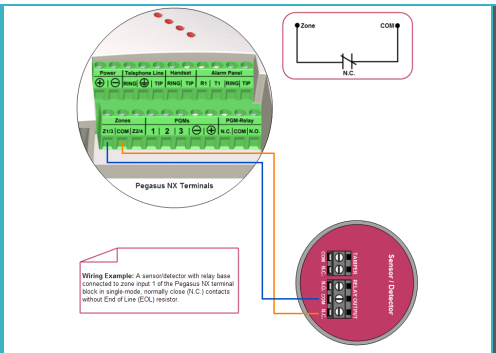
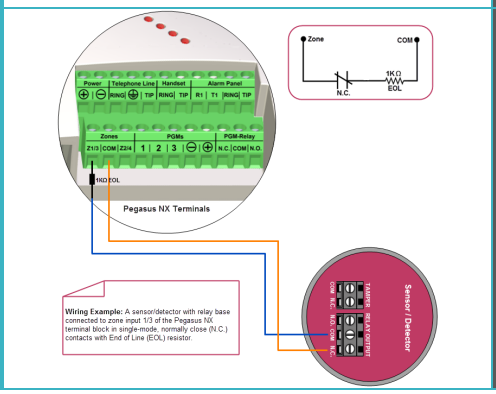
A sensor/detector with relay base connected to zone input 1/3 of the Pegasus NX terminal block in single-mode, N.C. contacts with EOL resistor with tamper & wire fault recognition.

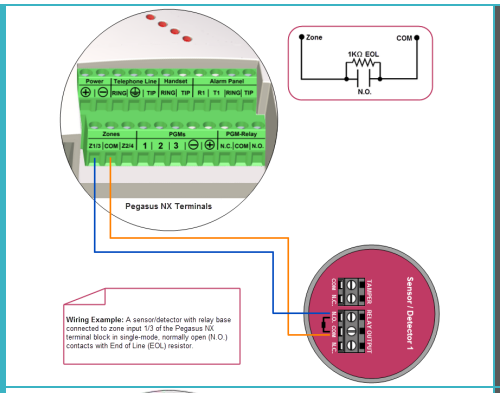
Pegasus NX used to switch a high current powered bell or siren.

A buzzer connected to the programmable open collector (O.C.) output 1 of the Pegasus NX terminals. External power supply (12V) is also provided.

11 How to Wire Sensors/Detectors to Pegasus NX?

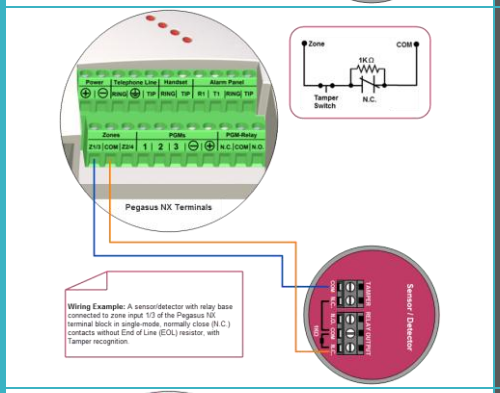
Pegasus™ NX is built-in two zones which are extended to four zone inputs. Pegasus™ NX supports zone input wiring in both single-mode and double-mode. A sensor or detector can be connected in nine different ways. The below table shows the different types of sensor or detector connections.

	Single-Mode: Normally Close (N.C.) Contacts without End of Line (EOL) Resistor To view the full sensor or detector wiring, click here
	Single-Mode: Normally Close (N.C.) Contacts with End of Line (EOL) Resistor To view the full sensor or detector wiring, click here


Zone
COM
1KΩ EOL
N.O.
Pegasus NX Terminals
Sensor / Detector 1
Wiring Example: A sensor/detector with relay base connected to zone input 1/3 of the Pegasus NX terminal block in single-mode, normally open (N.O.) contacts with End of Line (EOL) resistor.

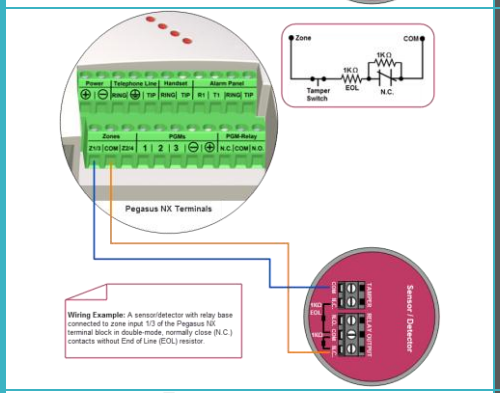
Single-Mode: Normally Open (N.O.) Contacts with End of Line (EOL) Resistor

To view the full sensor or detector wiring, click here


Zone
COM
1KΩ
Tamper Switch
N.C.
Pegasus NX Terminals
Sensor / Detector
Wiring Example: A sensor/detector with relay base connected to zone input 1/3 of the Pegasus NX terminal block in single-mode, normally close (N.C.) contacts without End of Line (EOL) resistor, with Tamper recognition.

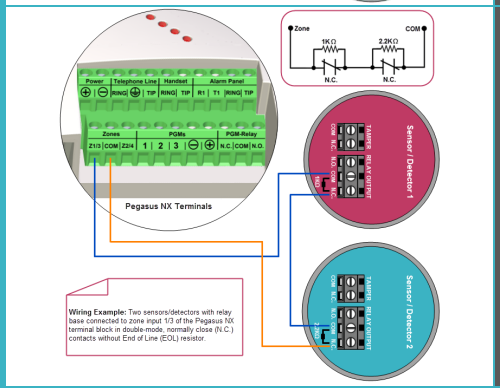
Single-Mode: Normally Close (N.C.) Contacts without End of Line (EOL) Resistor, with Tamper Recognition

To view the full sensor or detector wiring, click here


Zone
COM
1KΩ
Tamper Switch
1KΩ EOL
N.C.
Pegasus NX Terminals
Sensor / Detector
Wiring Example: A sensor/detector with relay base connected to zone input 1/3 of the Pegasus NX terminal block in double-mode, normally close (N.C.) contacts without End of Line (EOL) resistor.

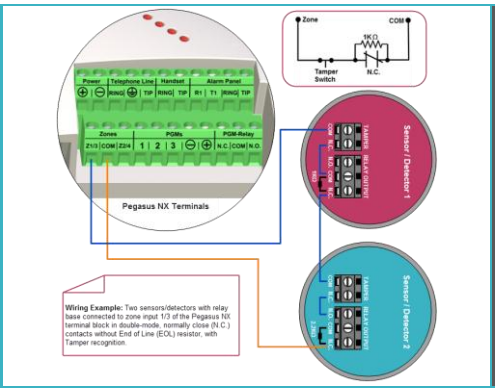
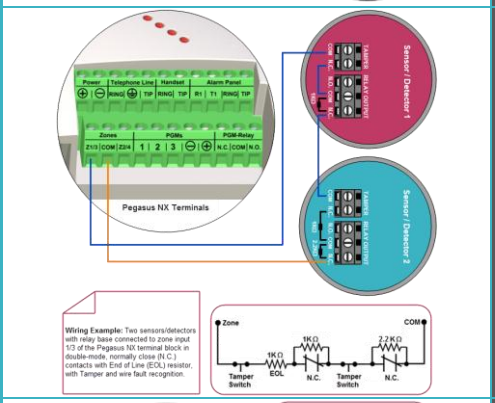
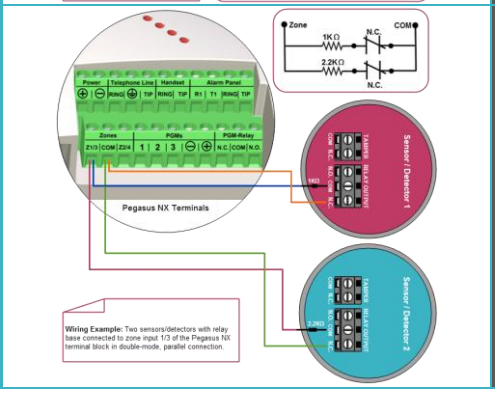
Single-Mode: Normally Close (N.C.) Contact With End of Line (EOL) Resistor, with Tamper & Wire Fault Recognition

To view the full sensor or detector wiring, click here


Zone
COM
1KΩ
2.2KΩ
N.C.
N.C.
Pegasus NX Terminals
Sensor / Detector 1
Sensor / Detector 2
Wiring Example: Two sensors/detectors with relay base connected to zone input 1/3 of the Pegasus NX terminal block in double-mode, normally close (N.C.) contacts without End of Line (EOL) resistor.

Double-Mode: Normally Close (N.C.) Contacts without End of Line (EOL) Resistor

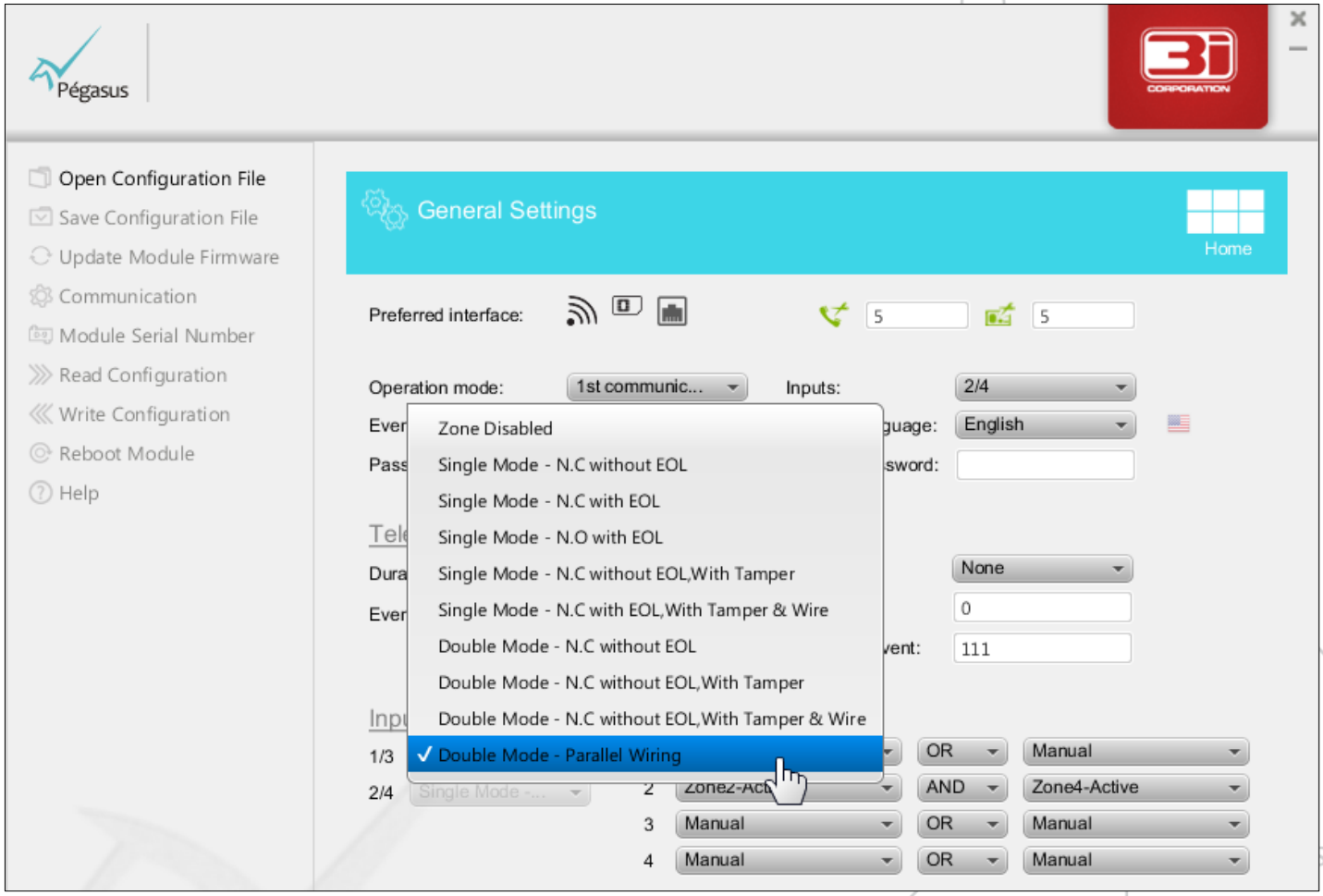
To view the full sensor or detector wiring, click here

	Double-Mode: Normally Close (N.C.) Contacts without End of Line (EOL) Resistor, with Tamper Recognition To view the full sensor or detector wiring, click here
	Double-Mode: Normally Close (N.C.) Contacts with End Of Line (EOL) Resistor, with Tamper & Wire Fault Recognition To view the full sensor or detector wiring, click here
	Double-Mode: Parallel Connection To view the full sensor or detector wiring, click here

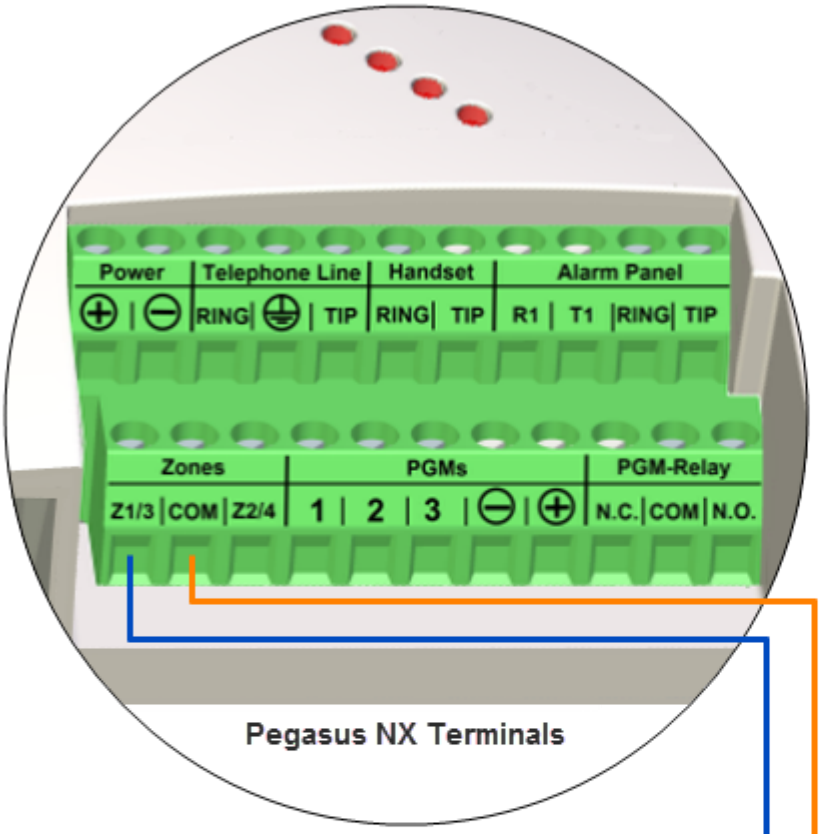
Once sensor(s) or detector(s) is/are connected by using any connection mentioned in the above table, selecting the same connection type in Pegasus™ Studio is required.

For Example:

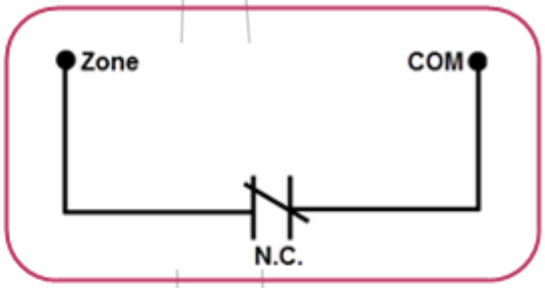
Two sensors are connected to Pegasus™ NX in Double-Mode: Parallel Connection. In Pegasus™ Studio, under **General Settings > Input**, select **Double Mode – Parallel Wiring**.

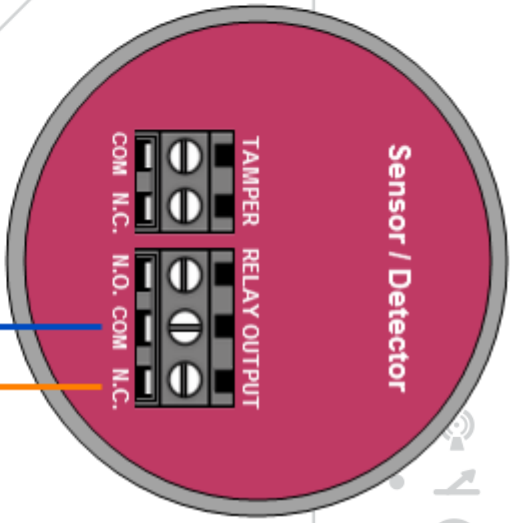

Pégasus
Open Configuration File
Save Configuration File
Update Module Firmware
Communication
Module Serial Number
Read Configuration
Write Configuration
Reboot Module
Help
General Settings
Home
Preferred interface:
Operation mode:
1st communic...
Inputs:
2/4
English
Zone Disabled
Single Mode - N.C without EOL
Single Mode - N.C with EOL
Single Mode - N.O with EOL
Single Mode - N.C without EOL,With Tamper
Single Mode - N.C with EOL,With Tamper & Wire
Double Mode - N.C without EOL
Double Mode - N.C without EOL,With Tamper
Double Mode - N.C without EOL,With Tamper & Wire
Double Mode - Parallel Wiring
None
0
111
1/3
2/4
OR
Manual
AND
Zone4-Active
3
4

Single-Mode: Normally Close (N.C.) Contacts without End of Line (EOL) Resistor



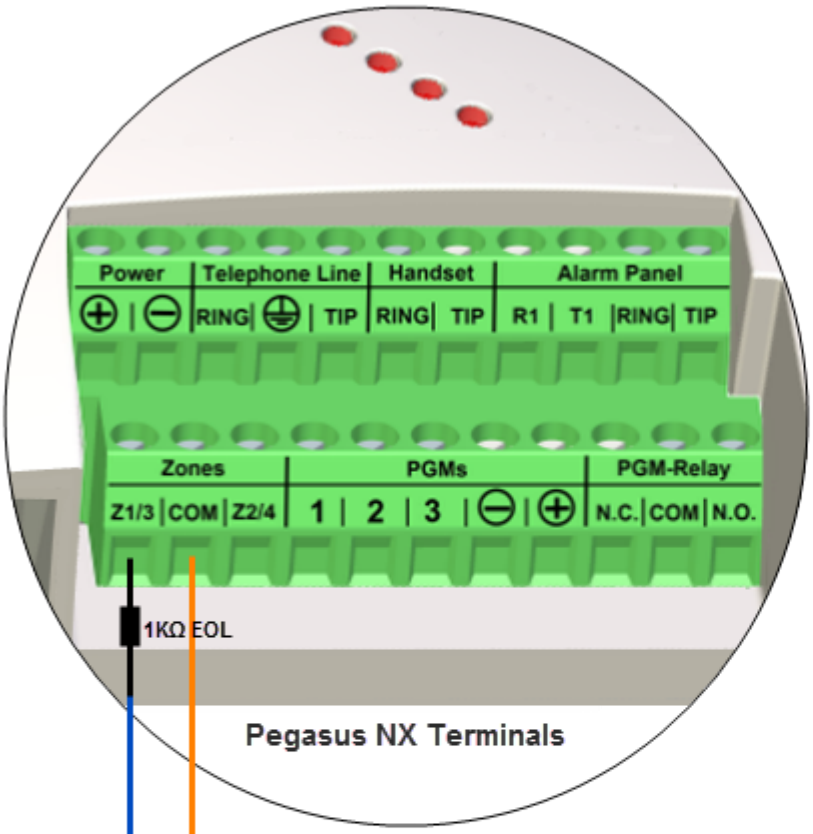
Pegasus NX Terminals



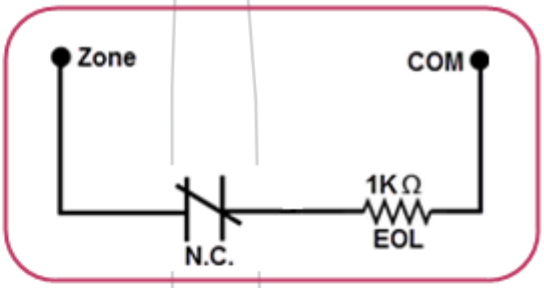


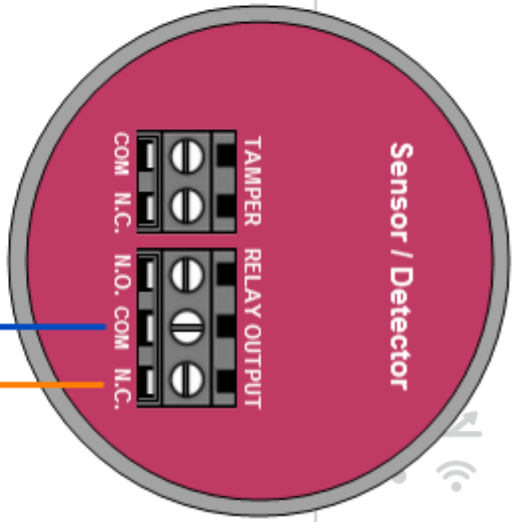
Wiring Example: A sensor/detector with relay base connected to zone input 1 of the Pegasus NX terminal block in single-mode, normally close (N.C.) contacts without End of Line (EOL) resistor.

Single-Mode: Normally Close (N.C.) Contacts with End of Line (EOL) Resistor



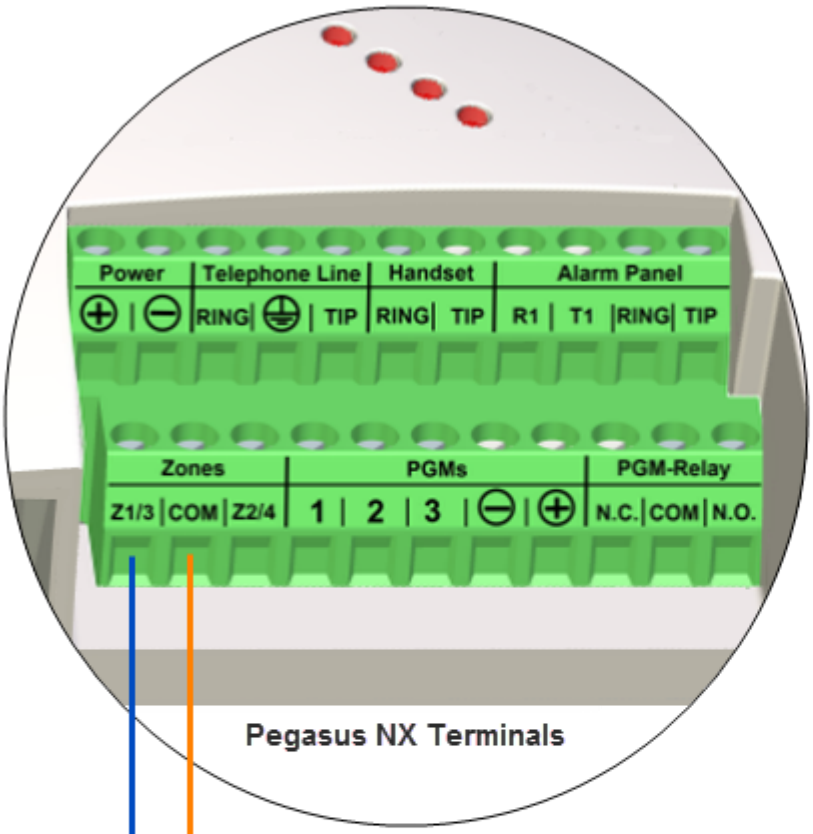
Pegasus NX Terminals



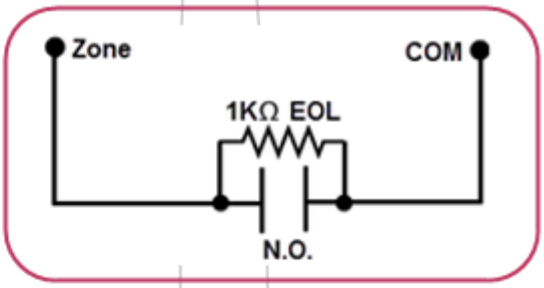


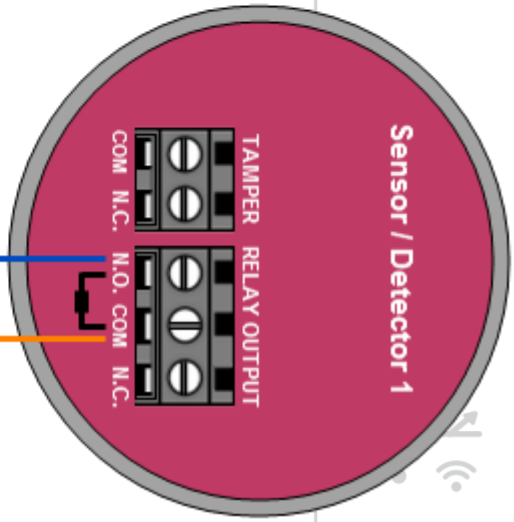
Wiring Example: A sensor/detector with relay base connected to zone input 1/3 of the Pegasus NX terminal block in single-mode, normally close (N.C.) contacts with End of Line (EOL) resistor.

Single-Mode: Normally Open (N.O.) Contacts with End of Line (EOL) Resistor



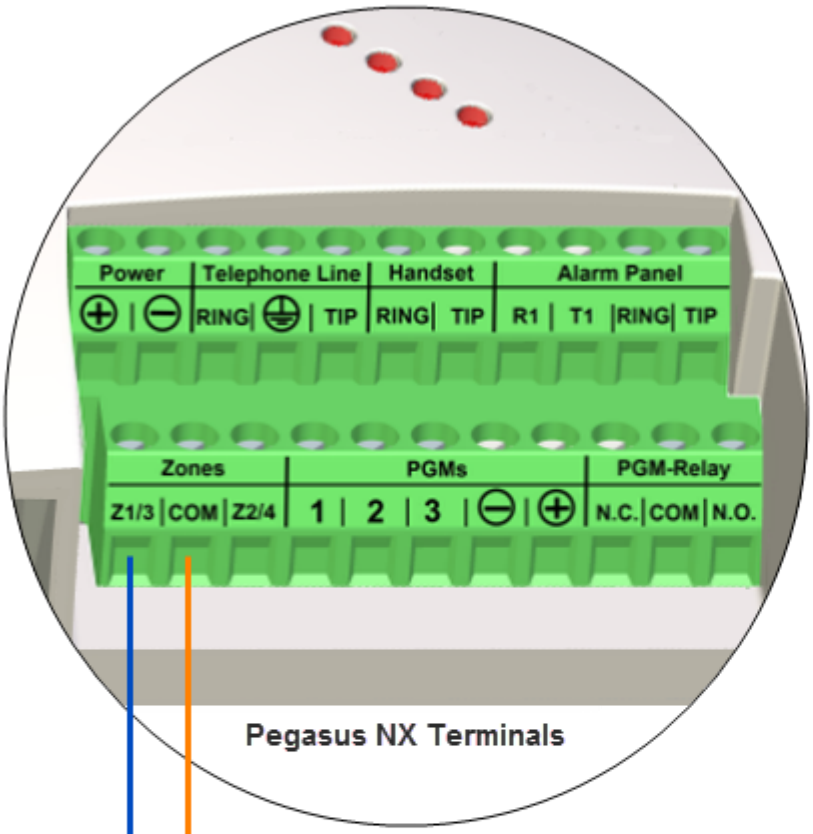
Pegasus NX Terminals



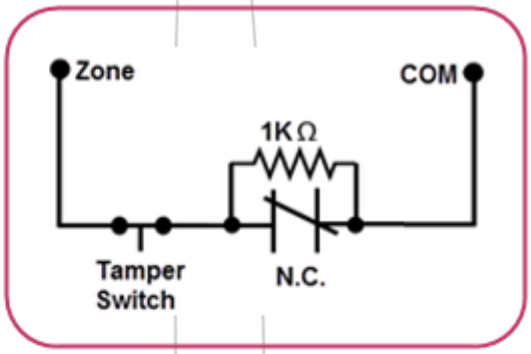


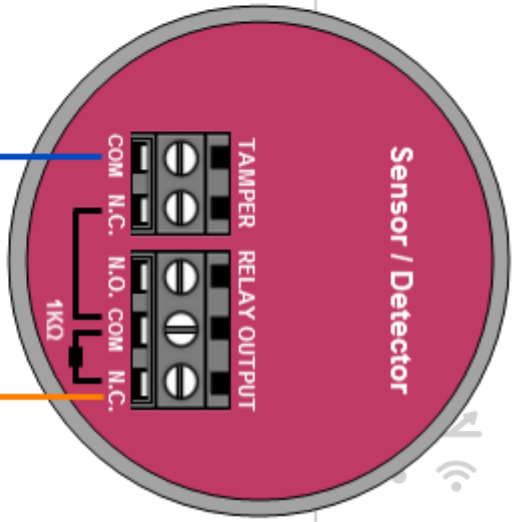
Wiring Example: A sensor/detector with relay base connected to zone input 1/3 of the Pegasus NX terminal block in single-mode, normally open (N.O.) contacts with End of Line (EOL) resistor.

Single-Mode: Normally Close (N.C.) Contacts without End of Line EOLResistor, with Tamper Recognition



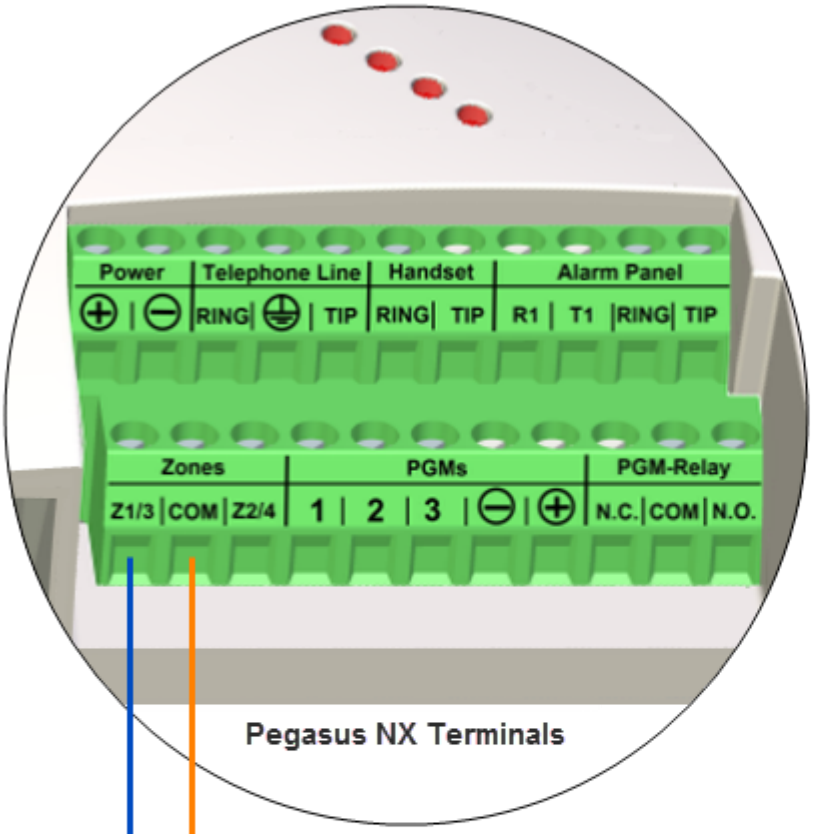
Pegasus NX Terminals



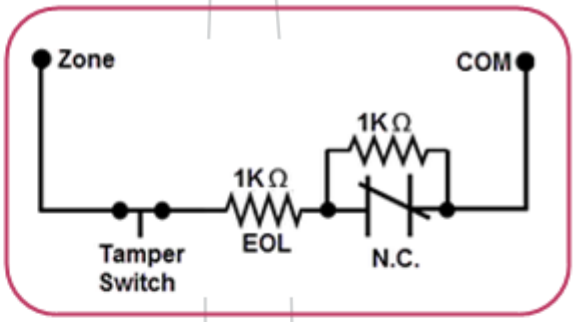


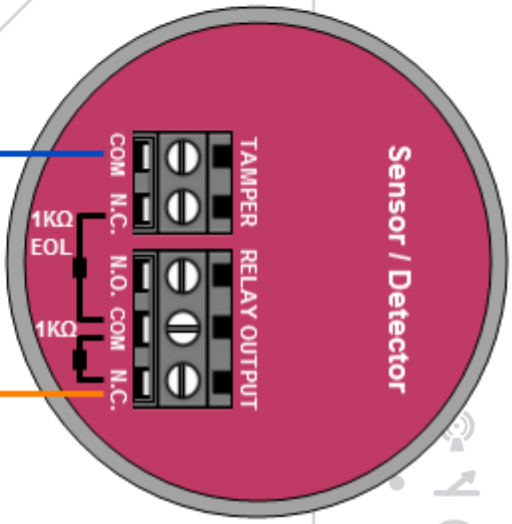
Wiring Example: A sensor/detector with relay base connected to zone input 1/3 of the Pegasus NX terminal block in single-mode, normally close (N.C.) contacts without End of Line (EOL) resistor, with Tamper recognition.

Single-Mode: Normally Close (N.C.) Contact With End of Line (EOL) Resistor, with Tamper & Wire Fault Recognition



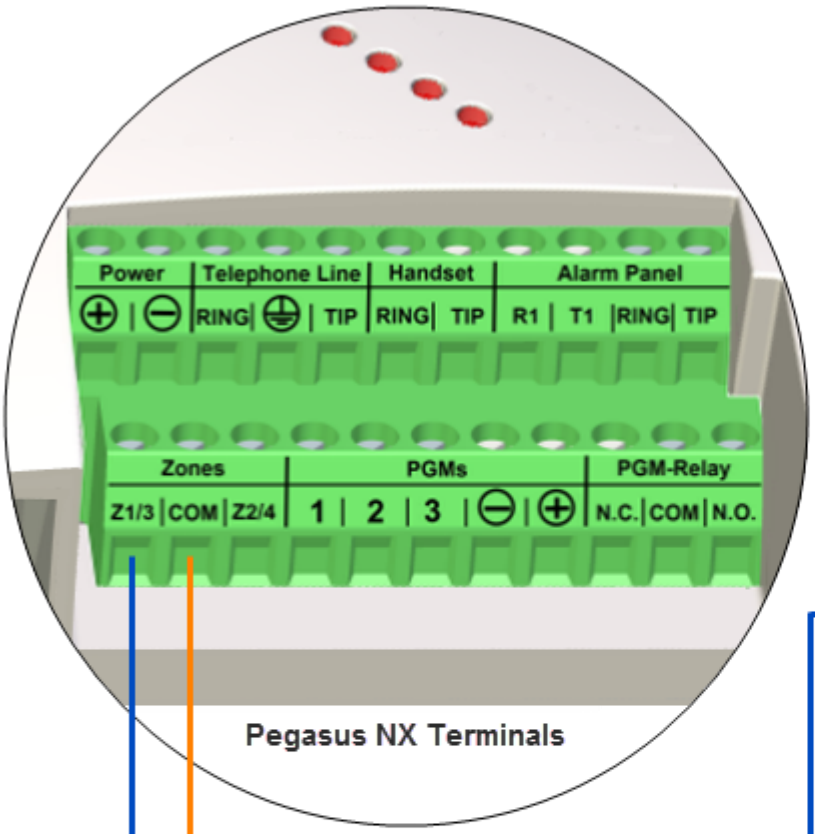
Pegasus NX Terminals



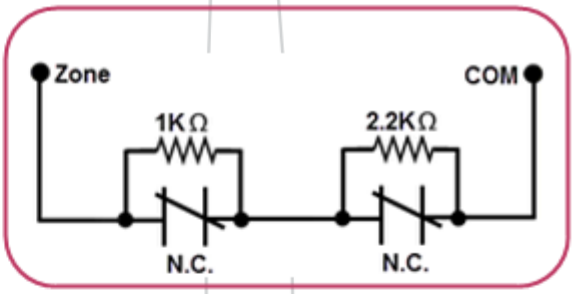


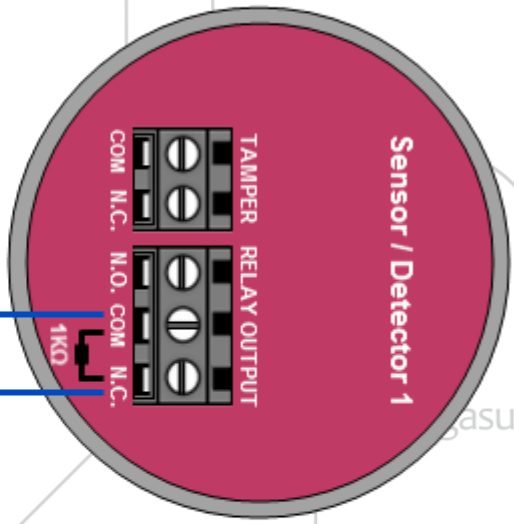
Wiring Example: A sensor/detector with relay base connected to zone input 1/3 of the Pegasus NX terminal block in single-mode, normally close (N.C.) contacts with End of Line (EOL) resistor with Tamper & wire fault recognition.

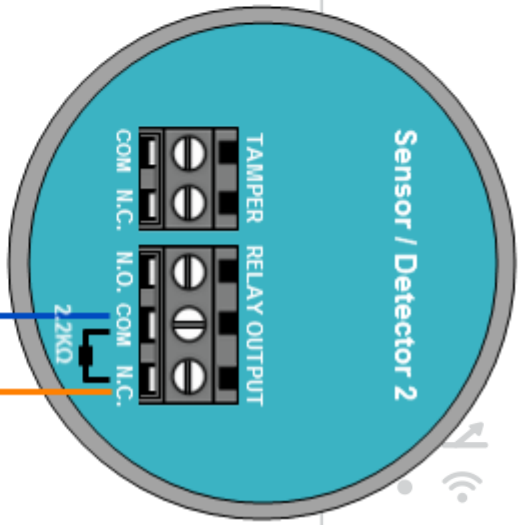
Double-Mode: Normally Close (N.C.) Contacts without End of Line (EOL) Resistor



Pegasus NX Terminals

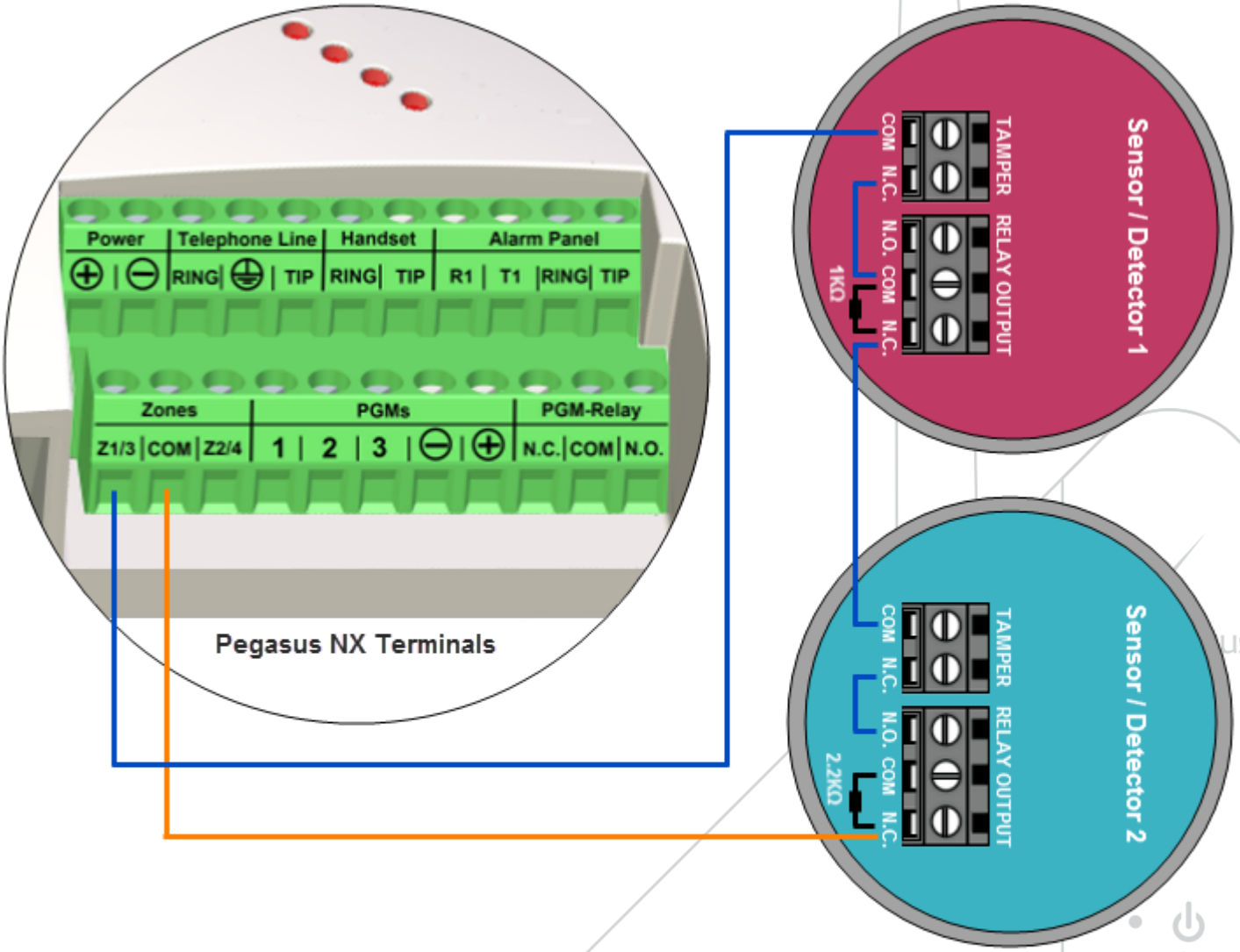




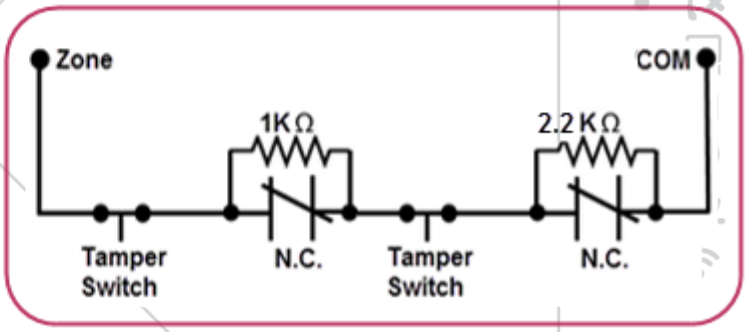


Wiring Example: Two sensors/detectors with relay base connected to zone input 1/3 of the Pegasus NX terminal block in double-mode, normally close (N.C.) contacts without End of Line (EOL) resistor.

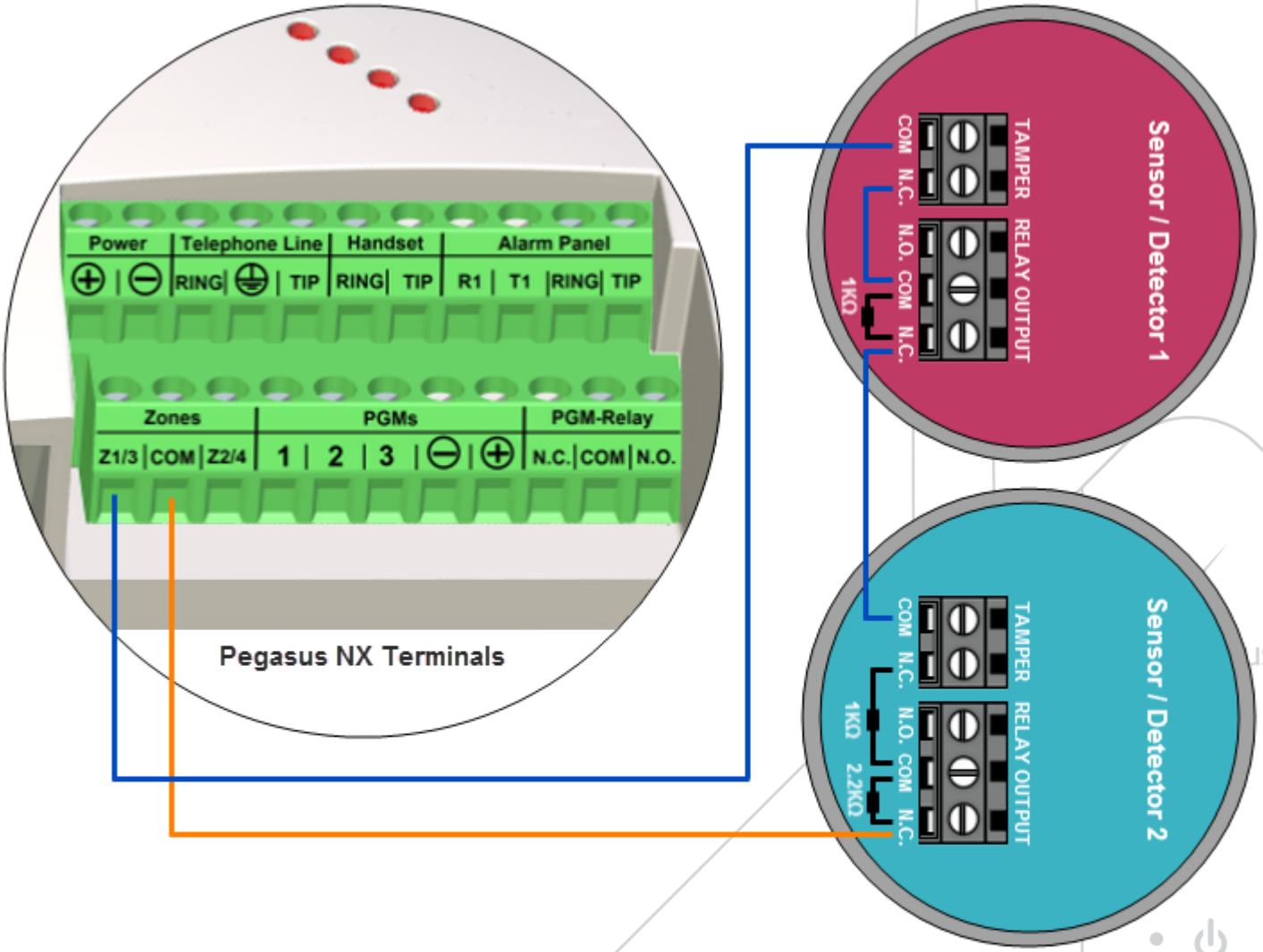
Double-Mode: Normally Close (N.C.) Contacts without End of Line (EOL) Resistor, with Tamper Recognition



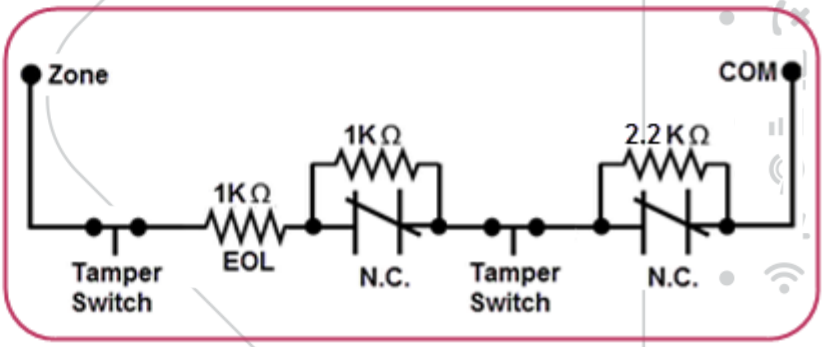
Wiring Example: Two sensors/detectors with relay base connected to zone input 1/3 of the Pegasus NX terminal block in double-mode, normally close (N.C.) contacts without End of Line (EOL) resistor, with Tamper recognition.



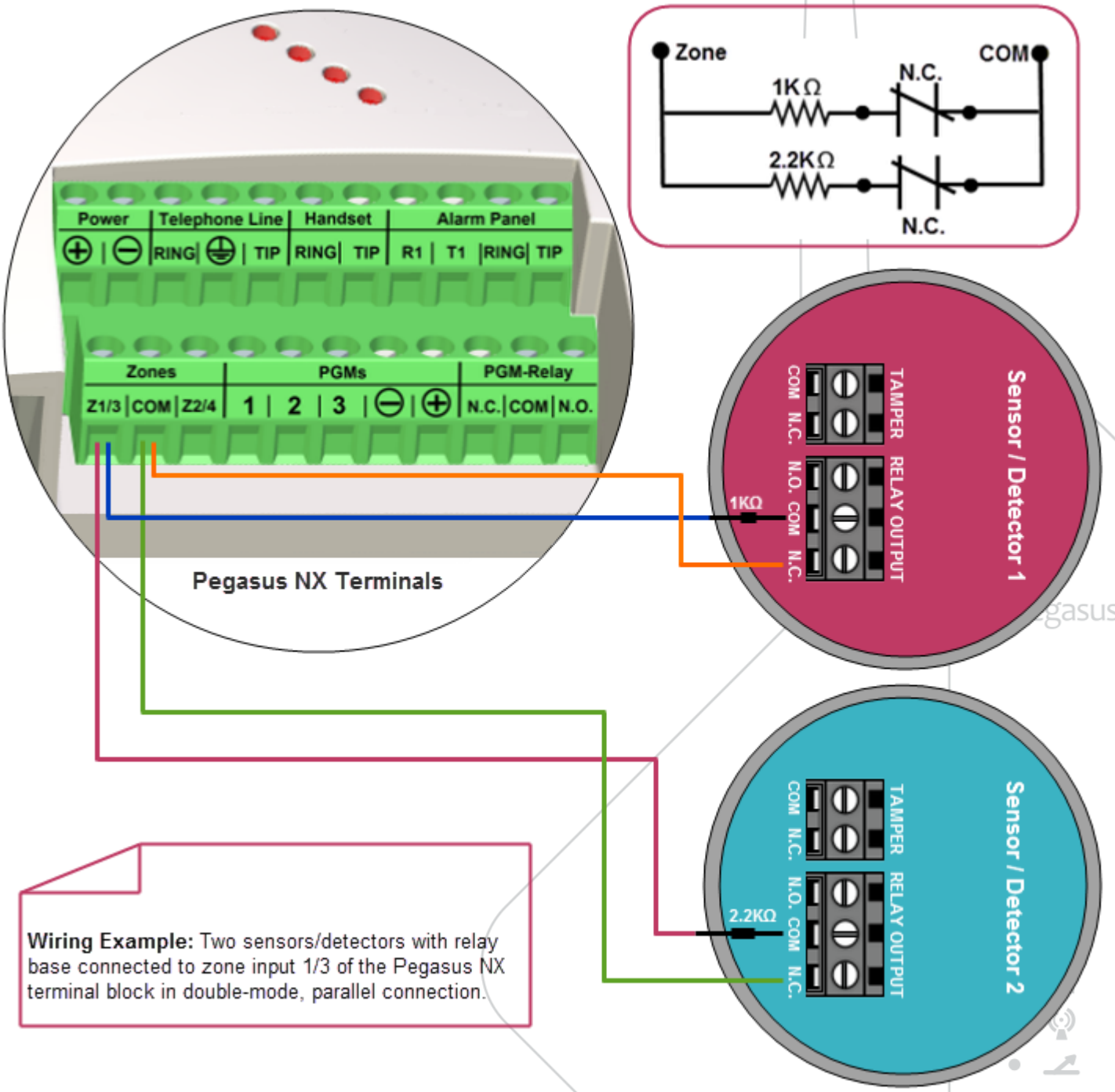
Double-Mode: Normally Close (N.C.) Contacts with End Of Line (EOL) Resistor, with Tamper & Wire Fault Recognition



Wiring Example: Two sensors/detectors with relay base connected to zone input 1/3 of the Pegasus NX terminal block in double-mode, normally close (N.C.) contacts with End of Line (EOL) resistor, with Tamper and wire fault recognition.



Double-Mode: Parallel Connection

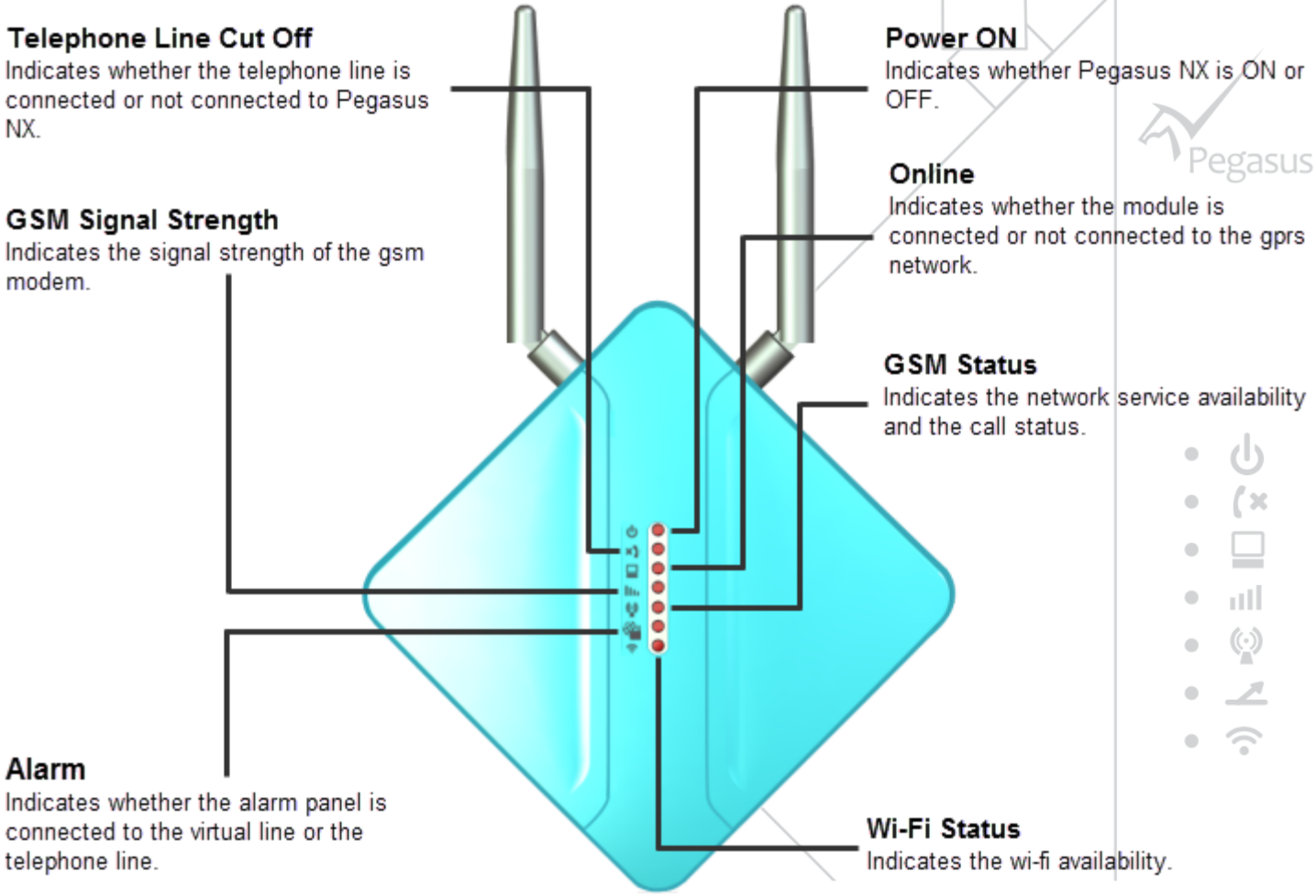


Wiring Example: Two sensors/detectors with relay base connected to zone input 1/3 of the Pegasus NX terminal block in double-mode, parallel connection.

12 How Does LEDs Work?

LEDs Description

Pegasus™ NX is built-in seven on board LEDs that emits light to the Pegasus™ front cover and front panel via specially designed and secured LED pipes under specific conditions.


Telephone Line Cut Off
Indicates whether the telephone line is connected or not connected to Pegasus NX.
GSM Signal Strength
Indicates the signal strength of the gsm modem.
Alarm
Indicates whether the alarm panel is connected to the virtual line or the telephone line.
Power ON
Indicates whether Pegasus NX is ON or OFF.
Online
Indicates whether the module is connected or not connected to the gprs network.
GSM Status
Indicates the network service availability and the call status.
Wi-Fi Status
Indicates the wi-fi availability.

LEDs	Condition	Function
Power ON Status	LED is OFF	(a) Application is not running, module is not in the working state.
	LED is ON	(a) Application is running, module is in the working state.
Telephone Line Cut Off	LED is OFF	(a) Telephone line is not connected to the module.
	LED is ON	(a) Telephone line is connected to the module.
Online	LED is OFF	(a) GPRS is not activated. (b) Module is not connected to the GPRS network.
	LED is ON	(a) GPRS is activated. (b) Module is connected to the GPRS network.
GSM Signal Strength	LED is ON	(a) GSM signal level is less than 12dB.
	LED is OFF	(a) GSM signal level is more than 12dB.
GSM Status	LED is OFF	(a) Device is OFF.
	LED Blinking: Fast Blinking (1 sec)	(a) Net search / Not registered / turning off.
	LED Blinking: Slow Blinking (3 sec)	(a) Registered Full service.
	LED Permanently ON	(a) Call is active.

LEDs	Condition	Function
Alarm	LED is OFF	(a) Alarm panel is not connected to the virtual line.
	LED is ON	(a) Alarm panel is connected to the virtual line
Wi-Fi Status	LED is OFF	(a) Wi-Fi is not activated. (b) Module is not connected to internet via wi-fi.
	LED is ON	(a) Wi-Fi is activated. (b) Module is connected to internet via wi-fi.

13 Appendix

Abbreviation

1	GPS	Global Positioning System	6	N.O.	Normally Open
2	GSM	Global System for Mobile communications	7	N.C.	Normally Close
3	GPRS	General Packet Radio Service	8	COM	Common
4	SIM	Subscriber Identity Module	9	GND	Ground
5	Wi-Fi	Wireless Fidelity	10	EOL	End of Line